

REGULATION 1.07 Excess Emissions During Startups, Shutdowns, and Malfunctions

Air Pollution Control District of Jefferson County

Jefferson County, Kentucky

Relates to: KRS Chapter 77 Air Pollution Control

Pursuant to: KRS Chapter 77 Air Pollution Control

Necessity and Function: KRS 77.180 ~~authorizes provides that~~ the Air Pollution Control Board ~~to adopt may make~~ and enforce all ~~needful~~ orders, rules, and regulations necessary or proper to accomplish the purposes of KRS Chapter 77. This regulation establishes the notification, ~~and reporting, and operational~~ requirements for ~~the owner or operator of a stationary source when excess emissions occur as a result of a~~ during startups, shutdowns, or malfunctions, ~~and emergencies.~~

SECTION 1 Definitions

Terms used in this regulation ~~that are not defined in this regulation herein~~ shall have the meaning given to them in Regulation 1.02 *Definitions*.

~~1.1 "Emergency" means a situation arising from a sudden and reasonably unforeseeable event beyond the control of the source, including acts of God, which requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation in the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.~~

SECTION 2 Excess Emissions

~~2.1 The owner or operator of a process or process equipment has a general duty to ensure that the emissions from the process or process equipment are in compliance with all emission standards at all times. This includes starting up and shutting down the process or process equipment in a manner that the emissions are in compliance with all applicable emission standards and, consistent with safe operating procedures, stopping input feed to the process or process equipment and shutting down the process or process equipment if excess emissions would likely result from a malfunction.~~

~~2.2† Excess emissions from a process or process equipment due to startup, shutdown, or malfunction, or emergency, that temporarily exceed the standards set forth by the District, shall be deemed in violation of the applicable emission those standards. unless, based upon a showing by the owner or operator of the source and an affirmative determination by the District, the applicable requirements of this regulation are satisfied.~~

~~2.32 Notwithstanding the provisions of section 2.1, if a federal regulation requires compliance with emission standards during startup, shutdown, malfunction, or emergency, excess emissions resulting from any of these events shall be deemed in violation of those standards even though, based upon a showing by the owner or operator of the source and an affirmative determination by the District, the applicable requirements identified in section 2.1 are satisfied. However, in the case of technology-based federal emission standards, an emergency shall constitute an affirmative defense to an enforcement action brought for noncompliance with these emission standards if, based upon a showing by the owner or~~

~~operator of the source and an affirmative determination by the District, the requirements of Section 5 are met. In the case of these technology-based federal emission standards, the District shall include a provision in the applicable permit that this affirmative defense is provided.~~

~~5.1 The affirmative defense of an emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:~~

~~5.1.1 An emergency occurred and that the permittee can identify the cause of the emergency;~~

~~5.1.2 The permitted facility was at the time being properly operated;~~

~~5.1.3 During the period of the emergency, the permittee expeditiously took all reasonable steps consistent with safe operating practices to minimize levels of emissions that exceeded the emission standards or other requirements in the permit, and~~

~~5.1.4 The permittee submitted notice of the emergency to the District pursuant to this regulation of the time when emission limitations were exceeded due to the emergency. This notice must fulfill the requirements of this section, and must contain a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.~~

~~5.2 In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.~~

~~5.3 This provision is in addition to any emergency or upset provision contained in an applicable regulation.~~

~~2.3 In determining the appropriate enforcement action for excess emissions, the District may consider the following factors:~~

~~2.3.1 The duration and frequency of excess emissions during startups, shutdowns, malfunctions,~~

~~2.3.2 Whether the excess emissions could have been prevented through careful planning and design,~~

~~2.3.3 Whether the excess emissions are part of a recurring pattern indicative of inadequate design, operation, or maintenance,~~

~~2.3.4 Whether the process or process equipment was, at all times, operated in a manner consistent with good practices for minimizing emissions,~~

~~2.3.5 For a malfunction, whether the owner or operator, consistent with safe operating procedures, stopped input feed to the process or process equipment and shut down the process or process equipment as soon as possible,~~

~~2.3.6 For excess emissions during a startup or shutdown, the extent to which the owner or operator complied with section 3.6,~~

~~2.3.7 For excess emissions during a malfunction, the extent to which the owner or operator complied with section 4.4,~~

~~2.3.8 For a malfunction, whether the excess emissions were the result of an unavoidable malfunction. To be deemed an unavoidable malfunction, the owner or operator of the process or process equipment shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence, all of the following:~~

~~2.3.8.1 The excess emissions were the result of an identified sudden and reasonably unforeseeable event beyond the control of the owner or operator, including forces of nature,~~

~~2.3.8.2 Corrective action to restore normal operation of the process or process equipment~~

- 87 was required,
- 88 2.3.8.3 The excess emissions were not caused by improperly designed equipment, lack of
- 89 preventive maintenance, careless or improper operation, or operator error, and
- 90 2.3.8.4 The process or process equipment was, at the time of the malfunction, being properly
- 91 operated, and
- 92 2.3.9 Whether the excess emissions exceeded a concentration in the ambient air that could
- 93 reasonably have caused an acute noncancer effect.
- 94 2.4~~3~~ Nothing in this regulation shall be construed to restrict the District's discretion to take, at any
- 95 time, appropriate enforcement action under KRS Chapter 77 if, upon information supplied
- 96 to the District pursuant to this regulation or otherwise available to the District, the District
- 97 determines that ~~this such~~ action is necessary to protect public health or welfare.
- 98 2.5 The owner or operator of a process or process equipment for which there are excess
- 99 emissions shall comply with the following requirements, as applicable~~These applicable~~
- 100 ~~requirements are as follows:~~
- 101 2.5~~1~~.1 For startups and shutdowns, ~~are in~~ Section 3, and
- 102 2.5~~1~~.2 For malfunctions, ~~are in~~ Section 4, ~~6, and 7, and~~
- 103 ~~2.1.3 Emergencies are in Section 5, 6, and 7.~~
- 104 2.6 If a notification or report to the District is required pursuant to this regulation to be in
- 105 writing, then compliance with the deadline shall be established as follows:
- 106 2.6.1 If the notification or report is sent via mail, then the date and time postmarked by the
- 107 U.S. Postal Service,
- 108 2.6.2 If the notification or report is sent via facsimile, then the date and time received by the
- 109 District as indicated on the printed copy received by the District,
- 110 2.6.3 If the notification or report is sent via electronic mail, then the date and time identified
- 111 as sent by the electronic mail received by the District, and
- 112 2.6.4 If the notification or report is hand-delivered to the District's office, then the date and
- 113 time received by the District as stamped by the District.
- 114 2.7 The owner or operator of a process or process equipment that is subject to a notification or
- 115 reporting requirement pursuant to this regulation may request, and the District may, for
- 116 cause, approve an extension of the deadline for submitting one or more elements of the
- 117 notification or report. The owner or operator may make this request by telephone, facsimile
- 118 or electronic mail. If the request is made by telephone, then the owner or operator shall
- 119 submit, by the end of that day, a confirmation written request by facsimile, electronic mail,
- 120 or mail.
- 121 2.8 Notwithstanding a requirement in these regulations for certification of a submitted report,
- 122 the notifications required by sections 3.1, 3.2, 3.3, 4.1, 4.3, and 4.6 are not required to be
- 123 certified by a "responsible official" as defined in Regulation 2.16 *Title V Operating Permits*
- 124 section 1.35. The reports required by sections 3.7, 3.8, 4.5, and 4.7 are required to be
- 125 certified by a "responsible official."

SECTION 3 Startup or Shutdown

- 126 3.1 ~~If When~~ excess emissions during any planned startup or shutdown are expected to
- 127 ~~occur~~~~exceed the standards, then~~ the owner or operator of the process or process equipment
- 128 ~~affected facility~~ shall notify the District in writing no later than 3 ~~three~~ days before the
- 129 planned startup or shutdown. ~~However,~~
- 130

- 3.2 If an unplanned ~~the~~ startup or shutdown during which excess emissions are expected to occur is necessitated by events, ~~other than a malfunction, that which~~ the owner or operator could not reasonably have foreseen ~~3 three~~ days before the startup or shutdown, then ~~the such~~ notification shall be given to the District by telephone, facsimile, or electronic mail within 1 hour after the decision to start up or shut down the process or process equipment was made, and, if the notification is given by telephone, in writing as promptly as possible, but no later than 24 hours after that ~~following the decision determination to shut down was made or~~ startup and in no event later than one day following the determination to startup or shutdown.
- 3.3 If an unplanned startup or shutdown pursuant to section 3.2 begins outside of the District's regular business hours (8:00 a.m. to 5:00 p.m. on Monday to Friday, not including holidays) and the initial written notification pursuant to section 3.2 was not available to the District during regular business hours, then, in addition to that written notification, the owner or operator of the process or process equipment shall leave a message on the District's main telephone line [(502) 574-6000] containing the information required by sections 3.5.1, 3.5.3, 3.5.4, and 3.5.6, and the name and telephone number of a contact person at the stationary source.
- 3.4 An unplanned startup or shutdown during which excess emissions are expected to occur that is necessitated by a malfunction shall be treated as part of the malfunction pursuant to Section 4.
- 3.5~~3~~ The written planned or unplanned startup or shutdown initial notification ~~notices~~ pursuant to section 3.1 or 3.2 shall include the following information:
- 3.5.1 The name and location of the stationary source,
- 3.5.2 The name, address, telephone number, and electronic mail address of the person responsible for providing the information required by section 3.5,
- 3.5.3 The process or process equipment involved in the startup or shutdown,
- 3.5~~3~~.4~~3~~ The ~~scheduled date and time~~ for the beginning of the startup or shutdown process, the expected duration of ~~for the~~ startup or shutdown process, and the expected time period during which excess emissions are expected to occur,
- 3.5.5 The physical and chemical composition and estimated quantity and concentration of excess emissions, or equivalent information that relates to compliance with the emissions standard, such as emissions monitoring data or results of an EPA-approved test method, for each air contaminant, ~~action, and~~
- 3.5~~3~~.6~~1~~ The reason for and ~~necessity duration~~ of the startup or shutdown,
- 3.5.7 The reason the startup or shutdown could not be accomplished without causing excess emissions, and
- 3.5.8 An explanation as to how the provisions of section 3.6 will be met.
- ~~3.3.2 The nature of the action to be taken during startup or shutdown,~~
- ~~3.3.4 The basis for determination that such startup or shutdown is necessary.~~
- 3.6 If excess emissions during a startup or shutdown of a process or process equipment are expected to occur, then the owner or operator of the process or process equipment shall comply with all of the following:
- 3.6.1 Reasonable, available, and practicable emission reduction measures, including process equipment design, operating procedures, and pollution prevention measures, shall be used to prevent or minimize excess emissions,
- 3.6.2 The frequency of operation of the process or process equipment in the startup or

- shutdown mode shall be minimized to the maximum extent practicable,
- 3.6.3 A bypass of any related control equipment shall not occur unless necessary to prevent loss of life, personal injury, or severe property damage, and the extent and duration of any bypass shall be reduced as much as necessary to minimize excess emissions, and
- 3.6.4 All emission and parametric monitoring systems for the process or process equipment shall be operated unless technically infeasible.
- 3.7 If a person has notified the District pursuant to section 3.1, 3.2, or 3.3 but no excess emission occurred as the result of the startup or shutdown, then the owner or operator of the process or process equipment shall send a written report to the District that includes the name and telephone number of a contact person at the stationary source and the information required by sections 3.8.1, 3.8.3, and 3.8.4, except indicating that no excess emission occurred. The written report may be sent by mail, facsimile, or electronic mail, and shall be sent no later than 5 working days following the completion of the startup or shutdown.
- ~~3.8.2 If the emissions exceed the standard for a period in excess of four hours, No later than 5 working days following the completion of a startup or shutdown during which excess emissions occurred, whether or not initial notification of the startup or shutdown pursuant to section 3.1, 3.2, or 3.3 was made to the District, the owner or operator of the process or process equipment affected facility shall send a written report notice to the District that includes the following information: no later than the end of the next working day following the fourth hour of excess emissions.~~
- 3.8.1 The name and location of the stationary source,
- 3.8.2 The name, address, telephone number, and electronic mail address of the person responsible for providing the information required by section 3.8,
- 3.8.3 The process or process equipment involved in the startup or shutdown,
- 3.8.4 The actual date and time of the beginning of the startup or shutdown process, the actual duration of the startup or shutdown process, and the actual time period during which excess emissions occurred,
- 3.8.5 The physical and chemical composition and calculated quantity and concentration of excess emissions, or equivalent information that relates to compliance with the emissions standard, such as emissions monitoring data or results of an EPA-approved test method, for each air contaminant, including a description of the method used for calculating excess emissions and an identification of the applicable emission standard that was exceeded,
- 3.8.6 An explanation as to how each provision of section 3.6 was met, and
- 3.8.7 The frequency of excess emissions during startups or shutdowns during the previous 2 years.
- 3.9 The District may require the owner or operator of a process or process equipment for which startups or shutdowns have resulted in repeated excess emissions to develop and submit a program to eliminate or minimize excess emissions. If the District determines that a program is appropriate, then the District shall notify the owner or operator in writing, specify the information that is required in the program, and establish a deadline for submittal of the program. Upon District approval, the owner or operator shall implement the approved program and the approved program shall be an enforceable requirement of the applicable District permit for the process and process equipment included in the program.

SECTION 4 Malfunctions

~~46.1 If When excess emissions from a process or process equipment resulting from due to a malfunction, (or from to an unplanned unforeseen startup or shutdown necessitated by a associated with malfunctions) or an emergency, occur are or are likely to occur may be in excess of the standards, the owner or operator of the process or process equipment affected facility shall, as promptly as possible, but no and in no event later than 1 one hour following the start of the malfunction or emergency, or, if a call to the 911 system was made, then no later than 2 hours following the start of the malfunction, notify the District by telephone, facsimile, or electronic mail. A call placed to the emergency number 911 constitutes notification to the District.~~

~~4.2 The initial notification of the malfunction pursuant to section 4.1 shall include the following information:~~

~~4.2.1 The name and location of the stationary source,~~

~~4.2.2 The name, address, telephone number, and electronic mail address of the person responsible for providing the information required by section 4.2,~~

~~4.2.3 The process or process equipment involved in the malfunction,~~

~~4.2.4 The date and time of the beginning of the malfunction, the estimated time before, consistent with safe operating procedures, input feed to the process or process equipment will be stopped and the process or process equipment shut down or the process or process equipment is returned to normal operation, whichever is earlier (the excess emissions end), and the estimated time period during which excess emissions are likely to occur,~~

~~4.2.5 To the extent that it can reasonably be determined within the context of the circumstances, the physical and chemical composition and estimated quantity and concentration of excess emissions, or equivalent information that relates to compliance with the emissions standard, such as emissions monitoring data or results of an EPA-approved test method, for each air contaminant,~~

~~4.2.6 If known or suspected, the likely cause of the malfunction, and~~

~~4.2.7 If applicable and known, the reason the processes or process equipment will not be shut down immediately, consistent with safe operating procedures.~~

~~4.3 If the initial notification pursuant to section 4.1 is required to be made at a time outside of the District's regular business hours (8:00 a.m. to 5:00 p.m. on Monday to Friday, not counting holidays), then, in addition to that initial notification, the owner or operator of the process or process equipment shall leave a message on the District's main telephone line [(502) 574-6000] containing the information required by sections 4.2.1, 4.2.3, 4.2.4, 4.2.6, and 4.2.7, and the name and telephone number of a contact person at the stationary source.~~

~~4.4 If excess emissions during a malfunction of a process or process equipment occur or are likely to occur, then the owner or operator of the process or process equipment shall comply with all of the following:~~

~~4.4.1 Reasonable, available, and practicable emission reduction measures, including process equipment design, operating procedures, pollution prevention measures, use of off-shift labor and overtime, and, consistent with safe operating procedures, immediately stopping input feed to the process or process equipment and shutting down the process or process equipment, shall be used to prevent or minimize excess emissions,~~

~~4.4.2 The frequency of operation of the process or process equipment in a malfunction mode shall be minimized to the maximum extent practicable and the duration of operation of~~

- the process or process equipment in a malfunction mode shall be reduced as much as necessary to minimize excess emissions,
- 4.4.3 A bypass of any related control equipment shall not occur unless necessary to prevent loss of life, personal injury, or severe property damage, and the extent and duration of any bypass shall be reduced as much as necessary to minimize excess emissions, and
- 4.4.4 All emission and parametric monitoring systems for the process or process equipment shall be operated unless technically infeasible.
- ~~4.1 In order for excess emissions resulting from a malfunction to not be deemed a violation, the showing and determination identified in section 2.1 shall confirm that all of the following have occurred:~~
- ~~4.1.1 The occurrence in question did not result from the failure of the owner or operator of the source to operate and maintain the equipment properly,~~
- ~~4.1.2 All reasonable steps were taken to correct, as expeditiously as practicable, the conditions causing the emissions to exceed the standards, including the use of off-shift labor and overtime if necessary,~~
- ~~4.1.3 All reasonable steps were taken to minimize the emissions resulting from the occurrence, and~~
- ~~4.1.4 The excess emissions are not part of a recurring pattern indicative of inadequate design, operation, or maintenance.~~
- 4.5 If a person has notified the District pursuant to section 4.1 or 4.3 but no excess emission occurred as the result of the malfunction, then the owner or operator of the process or process equipment shall send a written report to the District that includes the name and telephone number of a contact person at the stationary source, the information required by sections 4.6.1, 4.6.3, and 4.6.4, and the statement that no excess emission occurred. The written report may be sent by mail, facsimile, or electronic mail, and shall be sent no later than 5 working days after the input feed to the process or process equipment is stopped and the process or process equipment is shut down or the process or process equipment is returned to normal operation after the occurrence of a malfunction, whichever is earlier.
- 4.6 As soon as reasonably possible, but no later than 2 hours after the excess emissions ended, the owner or operator of the process or process equipment shall notify the District by telephone, facsimile, or electronic mail. If this notification is made by telephone, the owner or operator shall provide written notification by facsimile or electronic mail no later than 4 hours after the excess emissions ended. The written notification of the end of the malfunction shall include the following information:
- 4.6.1 The name and location of the stationary source,
- 4.6.2 The name, address, telephone number, and electronic mail address of the person responsible for providing the information required by section 4.6,
- 4.6.3 The process or process equipment involved in the malfunction,
- 4.6.4 The date and time that the excess emissions ended, and
- 4.6.5 If the initial notification to the District pursuant to section 4.6 was made by telephone, then the time that the telephone notification was made.
- 4.7 No later than 15 calendar days after the excess emissions ended, the owner or operator of the process or process equipment shall send a written report to the District that includes the following information:
- ~~6.2 If the time necessary to correct unlawful emissions will exceed four hours, the owner or~~

~~operator must notify the District of the malfunction or emergency by telephone at the time of this determination, and in writing no later than two working days after the start of the emergency or malfunction. Notification of completion of the corrective actions must be made by telephone to the District.~~

~~6.3 Malfunction and emergency reports and notices must include the following information:~~

~~46.73.1 The name and location of the stationary sourceair contaminant source and affected facility,~~

~~6.3.2 Its location,~~

~~46.73.23 The name, address, and telephone number, and electronic mail address of the person responsible person for providing the information required by section 4.7the affected facility,~~

~~4.7.3 The process or process equipment involved in the malfunction,~~

~~46.73.4 Confirmation of the actual date and time that the excess emissions endedof the occurrence,~~

~~46.73.5 The physical and chemical composition, rate, and calculated quantity and concentration of excess the emissions, or equivalent information that relates to compliance with the emissions standard, such as emissions monitoring data or results of an EPA-approved test method, for each air contaminant, including a description of the method used for calculating excess emissions and an identification of the applicable emission standard that was exceededduring the malfunction, or during the emergency, and~~

~~46.73.6 An explanation as to how each provision of section 4.4 was metThe measures adopted to minimize the duration and extent of the emissions during shutdown, startup, malfunction, or emergency.~~

~~6.4 Malfunction and emergency reports shall also include:~~

~~6.4.1 The time the excess emissions began and ended,~~

~~6.4.2 The time of the beginning and end of the breakdown, malfunction or emergency that is asserted to be the cause of the excess emissions,~~

~~6.4.3 An explanation and, where appropriate, an engineering analysis of the cause of the malfunction, breakdown or emergency,~~

~~6.5 The District, for cause, may waive the reports or extend the time period for filing the reports required by this section.~~

~~4.2 In cases where malfunctions are of a repetitious nature, or when more than 12 failures of the same or similar pieces of equipment occur in a 12-month period, the District shall require the owner or operator to submit a written program outlining a time schedule and corrective actions which will result in a permanent solution to the problems. The District reserves the right to continually evaluate and require corrections of malfunctions.~~

~~46.74.74 An analysis of the cause of the malfunction and the steps that will be taken to prevent or minimize similar occurrences in the future, and~~

~~4.7.8 The frequency of excess emissions resulting from malfunctions during the previous 2 years of the same or similar process or process equipment or that occurred because of the same or similar cause, and~~

~~46.74.95 Any additional information requested by as the District may require.~~

~~4.8 Upon written request from the owner or operator of a process or process equipment required to submit a report pursuant to section 4.7 for an extension of the due date to submit the information required by section 4.7.7, the District may extend the due date by up to 45 days~~

from the original due date.

SECTION 5 ~~Emergencies~~

SECTION 6 ~~Initial Notification and Reporting Requirements for Malfunctions and Emergencies~~

SECTION 57 ~~Extended Malfunctions and Emergencies~~

~~7.1 In the event of a malfunction or emergency for which the time necessary to correct unlawful emissions will exceed four hours, the Air Pollution Control Officer may authorize continued operation and impose conditions for continued operation.~~

~~57.12 If correcting the time necessary to correct the unlawful excess emissions from a process or process equipment resulting from a malfunction is anticipated to exceed 30 days and the owner or operator does not shut down the process or process equipment, then the owner or operator shall, as soon as known, but no later than 7 days after the beginning of the excess emissions, request, in writing, that the District initiate the process for the adoption of a Board Order to allow continued operation with excess emissions. The request by the owner or operator of the process or process equipment shall include a written program outlining a time schedule and corrective actions to abate the excess emissions. The time schedule may include a period for engineering review and analysis of the cause of the excess emissions and design of modifications to effect compliance with the emission standards. The owner or operator shall, in a timely manner, submit all information requested by the District.~~

~~5.2 Any resulting Board Order shall include a time schedule and required actions to comply with the emission standards.~~

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